

The

Ballarat

Naturalist

November-December
2002



E. Gummitifera

Sourcing the Seed

Speaker: Christine Gartlan, Ballarat Region Seed Bank Manager

The Seedbank is located at the Creswick Landcare Centre and was started eight years ago by Tim D'Ombrian, Roger Thomas and others; it is a non-profit, community based organisation which aims to ensure the availability of appropriately sourced indigenous seed for revegetation works. It services three catchments: Glenelg-Hopkins, Corangamite and North Central, extending from St. Arnaud to the Otways and Geelong, and from Ararat to Bacchus Marsh. The Bank provides workshops and training on all aspects of seed management.

Seed collection is done by both volunteers and commercial operators. Ideally seed should be collected from > 50 individual plants of the target species to ensure genetic diversity. Details of the habitat are noted—soil type, aspect, altitude, position in the landscape—and entered on a database so that requests for seed can be matched as closely as possible to the environment being re-vegetated. Only 10% of each plant's seeds should be collected, leaving the rest as a food source and for natural regeneration. Re-vegetation should be done with seed collected from the same locality as it is fully adapted to the area and there is less risk of hybridisation.

Eucalypt seeds are collected by cutting off the fruits and laying them out, removing leaves and turning them over regularly to ensure they dry out. Seed pods should be returned as litter to the original site as there may be seed remnants left inside. Tree seeds are relatively easy to collect but understorey species are difficult to collect and propagate.

Collecting may require permission from private landholders and permits where public land is concerned. DNRE has a permit system; for State Forests the managers will issue permits and royalties may have to be paid; roadsides are the responsibility

of local councils, or DNRE where protected species are involved. Opportunities for collection arise when trees need to be felled.

It is necessary to know the right time of year for seed collection, and how the seeds should be treated to ensure successful germination; even just getting the pods or capsules to release their seeds needs specific knowledge. Wattle pods are chopped and the seeds beaten from the pods mechanically, ensuring a greater yield. Berries and drupes can be fermented, while kangaroo grass can be harvested mechanically.

After extraction the seeds are cleaned by sieving to separate them from waste matter, packaged and labelled, then stored under controlled conditions in a dark room.

Germination can be initiated by soaking, smoking, combinations of heat and light, bacterial action and by passage through the gut of animals. What weights and quantities are we talking about? Red Gum *E. camaldulensis* seeds come in at 690 per gram!



Who are the seedbank's customers? Obvious ones are Landcare groups, DNRE, Forestry, private landowners, who may develop shelterbelts, erosion prevention, habitat creation; less obvious are craftspeople, wildlife carers needing feed for native creatures, and those using them for culinary purposes. And of course re-vegetation must occur to ensure continuity of seed supply.

Questions raised in discussion included the problem of hybridising. An example was given where two populations of Gold-dust Wattle were mixed, resulting in infertile plants and poor germination rates—an economic cost.

What is the value of collecting from remnant bush? Were these plants left because they were poor specimens—are we propagating inferior strains? Do loggers, when leaving so-called seed trees, leave the superior specimens?

Is it a good idea to plant a great variety of species in an area and see what survives rather than pre-determining what should be planted?

Chris had brought along sample packets of seeds for us to see, and donated a book about indigenous seed collection to the club—many thanks, Chris!

October Meeting Points

- 32 members and visitors were welcomed.
- Carol Hall reported on meetings attended re Ballarat Common Surplus Crown Land and Paul's Wetland. Report published in Ballarat Naturalist.
- Syllabus 2003: Suggestions for guest speakers and excursions were sought from members.

Show and Tell.

- Carol Hall: Original photographs taken at Stella Bedggood Memorial Lecture were displayed. These photographs were published in Ballarat Courier; Maps and article on drought from *The Australian*.

Field Reports

- John Gregurke: Masked Lapwing sitting on eggs at corner of Grevillea Rd and Dowling St. First clutch hatched in July have disappeared..
- Carol Hall: Two Caspian Tern seen at Dobson's Bay, Lake Burrumbeet.
- John Mildren: Water Rat in North Gardens Wetland. Caspian Tern at Lake Bolac.
- Kay Preston: New Holland Honeyeater in Tangled Maze garden.
- Ken McDonnell: Raft of 16 Great Cormorant on St Georges Lake early in the morning. Leave in groups of 2 and 3.
- Helen Burgess: Ring-tail Possum electrocuted on power lines and Striated Pardalote drowned in bird bath at Ballarat North.
- Maureen Christie: Possums eating rind from lemons and leaving flesh of fruit on tree.
- Jack Netherway: Barn Owl in bushy *Eucalyptus leucoxylon* in Ballarat garden. A Red Wattlebird was harassing it.
- Belinda Taylor: Pair of Australian Hobby over Glenelg Highway.
- John Hughes: Silver-eyes, in good numbers, feeding in shrubs in Sturt St. garden.

Excursion: Ted Errey Circuit, Brisbane Ranges

Leader: Carol Hall

The Ted Errey Nature Circuit was established by the Geelong FNC and officially opened last year. Ted was a stalwart of that club. Tracks and footpaths have been linked in an 8 km circular walk with informative plaques at points of interest. Its aim is to introduce the walker to some of the main types of habitat in the Brisbane Ranges. From an access point at the southern end of Switch Road the track follows undulating country, climbing gently until at the highest point you can overlook the

Rowsley Fault - and then heads steeply down into the Anakie Gorge and along to the Stony Creek picnic area. From here it climbs back up along Outlook Track on the west side of Switch Road to the initial access point. Outlook Track is also part of the Three Day Walk indicated on the National Park map.

We selected two sections of the walk for the day's outing: Anakie Gorge in the morning, with the emphasis on birds, and the Aqueduct and Nelson Tracks in the afternoon with plants as the main theme.

Ken Hammond writes: On a beautiful spring morning 15 members were in attendance on the excursion and after parking at Stony Creek Picnic Area we set off at a leisurely pace along the Anakie Gorge. The sun was shining, a gentle breeze making conditions for bird watching ideal. The birds were enjoying the weather too: the strong call of the Rufous Whistler echoed through the gorge in contrast to the mellow musical call of the Grey Shrike-thrush. Crimson Rosellas were giving their tinkling bell-like call and we constantly heard the down-the-scale call of the Fantailed Cuckoo. Another migrant, the Olive-backed Oriole was also a member of the morning chorus. We had close-up views of the Striated Pardalote, one of my favourite birds.



Echidna
(Hyett & Shaw)

About this time we were distracted from the birds by the antics of a rather adventurous Echidna which was making its way down a narrow boulder-strewn gully just across the creek from us. It finally arrived on a flattish rock about 40cms high. I heard a voice say how well it got down from there - the next moment it appeared to walk over the edge of the rock, landing in a curled-up ball. In less than a moment the Echidna carried on with its morning stroll quite unconcerned; those spines are obviously very good shock absorbers.

Bird List for the day

Sulphur -crested Cockatoo
Grey Shrike-thrush
Fantailed Cuckoo
Brown Treecreeper
Kookaburra
New Holland H/E
White-eared H/E
White-naped H/E
Yellow-tufted H/E
White-browed Scrubwren

Superb Fairy-wren
Horsfield's Bronze Cuckoo
Rufous Whistler
Golden Whistler
Crimson Rosella
Red-browed Firetail
Spotted Pardalote
Striated Pardalote
White-throated Treecreeper
Tree Martin

Olive-backed Oriole
Yellow Robin
Brown Thornbill
Australian Raven
Australian Magpie
Magpie Lark
Grey Fantail

Carol Hall continues:

After lunch at the Stony Creek picnic area (Brown Treecreepers waited around expectantly) we drove back to the Aqueduct and Nelson Tracks. Common Flat-pea *Platylobium obtusangulum* and Rough Bush-pea *Pultanea scabra* were blooming in abundance, while the

Golden Wattle *A. pycnantha* had largely finished. However Hedge Wattle *A. paradoxa* was at its best, as was Upright Guinea-flower *Hibbertia riparia*.



Golden Wattle

Waxlips *Glossodia major* were scattered about, and one patch of Nodding Greenhoods *P. nutans* was found along the edge of Switch Road. However the Blunt Greenhoods *P. curta* we had found at the base of the Manna Gum last month were over. Large shrubs of *Grevillea rosmarinifolia* occurred along the road as well, making the area very colourful. When we had checked the area out three weeks ago we had found Golden Grevillea *G. chrysophaea* there too. A highlight today was the finding of a few specimens of *G. steiglitziana* in full bloom.

Love Creeper *Comesperma volubile* was garnishing many of the bushes. The leaves of the Slaty Helmet Orchid *C. incurvas* were frequently found but whether they'll flower after this dry season is problematical. Blue Stars *Chamaescilla corymbosa* made single bright spots of colour at regular intervals along with Common Billy-buttons *Craspedia variabilis* and Fringed Everlasting *Chrysocephalum baxteri*.



A large patch of Cinnamon Fungus had decimated one area of Austral Grass-trees further along Nelson Track, but elsewhere they made a lovely show of bright green in an otherwise olive green and brown mosaic of shrubs. Along this track there was considerable evidence of ants and correspondingly large numbers of echidna diggings; we saw an echidna here last month. Along here too, Horny Isopogon *I. ceratophyllus* was in flower, its red and yellow blooms well down in amongst the prickly protective leaves.

A final stop near the north end of Butcher's Road was made to see if the small patch of Mayfly Orchids *Acianthus caudatus* was still in evidence by the charred twin trunks of a Stringybark; one was still fresh, the others were drooping.

Much use was made by many of us of the Triggs' book *Wildflowers of the Brisbane Ranges* - great value.

A most fulfilling day; how pleasant to have left the jackets in the cars and wander along with bare arms in the sunshine.

Travellers' Tales - Lake McIntyre

Lake McIntyre is a not-to-be-missed spot when visiting the Limestone Coast. Limestone Coast is the brand name of tourist promotion for the South East of South Australia.

Lake McIntyre has been transformed from a quarry into an excellent bird habitat. The quarry was modified to make a lake with varying water depth. It has deep-water areas for Hardhead, Grey and Chestnut Teal, shallow areas for Black-winged Stilt, reed growth for Buff-banded Rail, muddy edges for Black-fronted and Red-kneed Dotterel, and several islands of differing size and vegetation.

The surrounding area has been planted with a variety of indigenous and other native plants. As this vegetation grows it will attract a larger range of bush birds. Thirty four species of birds were seen in a one-hour visit in mid-August including about 200 Black-tailed Native-hen.

A gentleman who is the driving force of the local management committee was doing maintenance work when we visited. He has recorded 110 bird species including 42 water birds and waders. Many birds have nested in the reserve.

Facilities include walking trail, bird hides, interpretive signs, named plants, barbecues, picnic area and toilets.

Lake McIntyre is located 4km west of Millicent on the Southern Ports Highway to Robe and Beachport. Enter off Saleyards Road.

John Gregurke.

Review

Life on Air

David Attenborough pub. BBC. Hardback, 384 pages, many photos. \$50

After graduating from Cambridge University in Zoology, David initially worked for a publisher. When TV was in its infancy he applied for a job and became an interviewer and producer. Thus began a long career combining his interest in natural history with a medium which, as technology developed, enabled him to show his audience ever more intimate details of far-away places and their peoples, plants, birds and creatures.

He provides an insight into the workings of the BBC as he rises through the ranks to become head of both BBC 1 & 2, and demonstrates the inventiveness displayed by his camera teams in obtaining the shots they wanted, and his own experiences - some funny, some dangerous, all unique - on their journeys. He describes his encounters with well-known figures from all walks of life, and reveals the incredibly varied life he has led. Easy and fascinating reading.



After months in the planning, the weekend finally arrived! One hundred Field Naturalists had registered, drawn from Timboon, Sunraysia, Donald, Melbourne, Castlemaine, Bendigo, Albury-Wodonga, Geelong and Ballarat. Out of town members were mostly staying at nearby caravan parks and motels.

An orientation evening on the Friday enabled members to mingle and renew contacts, while our slide show provided visitors with an overview of the environment of the Ballarat area and two of the projects the club had been involved in - the Anchor Plants and the Lake Wendouree Swans.

Excursions commenced on the Saturday in cool but sunny weather with groups travelling to Enfield Forest, Lal Lal Historic Reserve, St. George's Lake and Mt. Beckworth, Dobson's Bay and Devil's Kitchen, and Clarksdale Bird Sanctuary.

At the 50th Anniversary dinner at Webbcona Bowls Club that night, 90 members gathered to celebrate the cutting of the birthday cake, made and iced by Margaret Smerdon, daughter of Stella Bedggood, the decoration consisting of sprays of *Grevillea bedggoodiana* crafted from icing. Dick Southcombe well and truly launched our publication *Discovering Ballarat's Bushland* while Tim D'Ombra, guest speaker, spoke of issues current in local conservation programs. We were also able to repay the VFNCA at this time two-thirds of the loan given to us to produce the book.

Cold blustery weather greeted us on the Sunday morning when groups set forth to look at the birds of Lake Wendouree, the northern Yarrowee River, the Trout Hatchery, Mt. Buninyong and Creswick Regional Park.

Members returned to the Horticultural Centre for lunch, many choosing to take advantage of the box lunch ordered beforehand. Whilst the formal part of the weekend was over, some members used the journey home to visit other local spots of interest.

Many thanks to all those members of FNCB who contributed in any way towards the success of the weekend - even those who brought supper but were otherwise not involved in the weekend's activities. Around 25 of our members carried out a variety of tasks before, during and after the camp-out.



Carol Hall.

FNCB 50th Anniversary

Text of remarks made by President Carol Hall at the Anniversary Dinner.

A major reason for choosing to host a VFNCA camp-out in 2002 is in order to celebrate the 50th anniversary of the Club - that is the 50th anniversary of the present Club which was revived in 1952.

In fact the Club's history is much older than this. In 1882 a Ballarat Field Club and Science Society was formed at the School of Mines Ballarat, bringing together staff of SMB and interested members of the general public. It hosted lectures and excursions, and published a record of its activities. The founding president, Mr. James Oddie said at the 1884 AGM that the Club provided "rational enjoyment and mental profit" to its members. Interestingly, in the light of our activities this weekend, 85 years ago the May outing was to the tuff beds of Lake Burrumbeet and to climb Mt. Callender, and in August they visited Lal Lal coal and iron mines. SMB still provides us with accommodation for our meetings.

Due to the 1st World War the club went into abeyance in 1918. Interest was revived in 1952 when 17 people met to form the present Club. The founding secretary was Jack Wheeler who for many years wrote a natural history column in the Ballarat Courier, and who in 1977 was awarded the Australian Natural History Medallion.

1977 was of course the present Club's 25th anniversary; it also was commemorated by the publication of a 50 page booklet, whose contents included recollections of some of the founders and the endeavours of members in the active conservation of threatened habitats. Where once people who went out looking at geology, plants and creatures were considered rather peculiar, now such activities are recognised for their worth. The observations compiled by our forebears form a valuable set of data by which comparisons can be made regarding the health of the environment. Given the increasing urbanisation of our society and its lack of connectedness to the natural environment, the existence of clubs such as ours is becoming more and more important in providing that link.

It is good to note that while we still have to remain vigilant if our native bush is to be conserved, the growth of an environmentally aware population means that today there are more voices to be heard alongside ours.

Our birthday cake tonight is decorated with a flower of the Enfield Grevillea, *Grevillea bedgoodiana*. Endemic to the Enfield area, this plant was named after Stella Bedgood, who was secretary of the Club from 1958 - 1970 and was later made a life member. Her daughter Margaret Smerdon made the cake and has crafted the decoration in icing.

I now call upon a member having a long association with the club, Maureen Christie, to cut the cake.

***Shut your eyes and
make a wish!***



Excursion: Wetlands

Leader: Tim D'Ombrain

Twenty-one members met Tim on a gloriously sunny but not too hot day to visit local artificial and natural wetlands. The sites visited illustrated the need for the control and treatment of urban storm water, and the importance of natural wetlands in maintaining biodiversity, habitat, and regulating flow during floods and droughts.

At the North Gardens Wetland and the Yarrowee-Redan Wetlands, Tim explained the reasoning behind the development of the projects and how the system of pools and channels works. Increasing urbanisation, with its impervious surfaces of roofs, roads and carparks, produces large volumes of run-off. The speed of flow can cause scouring of drainage lines, increased sedimentation, accumulation of heavy metals and destruction of habitats. Pollution is then carried into the sea. Where once natural run-off peaks occurred on average every 5 years, now they occur every 3 months, and the ecosystems have insufficient time to recover. Sharp peaks have replaced a more even flow.

Litter traps first collect gross pollutants down to cigarette stub size; water flows into a pool where speed checks dissipate energy during periods of heavy flow. At such times an overflow channel carries excess water around the intervening pools to the lowest one, but during normal flow water slowly passes from one pool to the next. A variety of aquatic plants slow the flow, use up nutrients, and provide habitat and food for water birds, insects and amphibians.

In the North Gardens Tim explained the hydrological engineering involved and went on to describe the aquatic plants being used—and the need to protect them from water birds until they are established. The banks have been planted using weedmat to prevent invasion of unwanted species until the plantings have thickened sufficiently to exclude weeds. *Juncus* sp., *Carex* sp., and Water Ribbons are extensively used. One goal is to recreate wet tussock grassland using species such as *Poa* sp., Milky Beauty-heads, Snowy Mintbush, Kangaroo Grass and *Pelargonium* sp. Large trees capable of producing hollows or which are interesting specimen trees (such as the exotic Swamp Cypress on the lowest island which breathes by means of pneumatophores) are retained, although inevitably there are some deaths due to higher water levels. Due to space constraints the pool sides are steeper than is ideal so there is less area of ephemeral wetland. We saw Kangaroo Apple and *Callistemon* in flower in the drier zones.

The Yarrowee Creek has been little more than an urban drain between Ballarat and Garibaldi. Lined with bluestone, or choked with willows and sediment, the water heavily polluted, it was a mess. Out of 160 plants identified along its course by Roger Thomas, 140 were weeds. Gorse figured prominently.

Adjacent to the sewerage pipe carrying sewage to the Ballarat South Treatment Plant, we saw that willows had been removed by catchment crews; marshes have been created alongside the stream channel into which surplus water is diverted. Ryecorn, a sterile version of ryegrass, is being used to stabilise the marsh boundary and prevent weed invasion. Similarly dense groups of shrubs have been established on the steeper banks.

Due to excessively high stormwater flows down the Yarrowee Creek, wetland rehabilitation at the confluence of the two waterways has focused on the Redan Creek where a transformation has taken place in the last few months. A concentrated effort has seen a series of pools created with dense plantings of natives requiring no weeding or spraying. This has the potential to attract varied wildlife and provide an aesthetically attractive passive recreation area.

Dr. Tim Fletcher's home in Cobden Street provides a contrast in scale. On a suburban block he channels run-off from the roof and driveway into a miniature wetland at the lower end of the garden. An engineer, Tim specialises in catchment hydrology (he is a consultant on the Paul's Drain project described in the October newsletter.)

Run-off is directed into two pools; the first is deep and narrow and copes with the speed of flow; the second, filled from the first via pipes through the bank between, is shallower and wide. Excess flow is diverted around the pools. Beyond his back fence is a drainage line with steep sides planted with pines. Pool size was determined by considering local rainfall totals, frequency and duration, and roof catchment area. Calculations suggested a "design storm" of 72 hours' duration every 5 years, requiring 14m³ pool volume.

The formal lawn is separated from the first pool by a curved line of Poa grass, then beyond is a veritable jungle of sedges and rushes nearly hiding the pool. Around the drier margins are hop bush, tea-tree, nardoo, kangaroo apple, wattles, Dianella sp. Sourcing his plants from Tim D'Ombra's indigenous nursery, he planted a great variety and let nature decide which would dominate.

A nearly natural wetland along Bray's Road, Ross Creek where a shallow dam has spilled out over almost flat land for many years provided another contrast. The property had been lightly grazed but never cleared; superb specimens of Swamp Gum *E. ovata* dominated a grassy woodland where Bulbine Lilies, Milkmaids, Grass Trigger-plants, Creeping Bossiaea, Chocolate Lilies, Nodding Greenhoods, Common Riceflower and Spotted Sun Orchids grew in profusion. In the spongy damp areas at the dam grew a carpet of *Ranunculus inundatus*, Swamp Wallaby Grass, and Prick-foot, interspersed with huge yabby holes. It was the first time too that we had heard a range of bush birds - Grey Thrush, Striated Pardalote, Crimson Rosella and various honeyeaters.

A brief stop at a natural lagoon near the old eucalypt distillery site alongside the highway between Hanson's Rd and Enfield enabled Tim to show us more wetland species including an insectivorous floating plant called *Utricularia*. A Swamp Harrier, Great Cormorant and White-faced Heron were sighted.

Dereel Lagoon had no surface water, though it was still spongy underfoot; the thick organic layer was covered with Running Marshflower, usually an upright species with yellow flowers on tall stems. The Water Ribbons had died off and no pink Fairies' Aprons were to be seen. The lagoon contains a number of sedges including *Lepidosperma* sp.

Tim gave us a tour of his indigenous nursery with its growing emphasis on wetland plants grown in discarded bath tubs obtained from Geelong recyclers. Natives found on local stream, road and rail reserves were being propagated in a series of beds.

Finally he showed us a newly acquired 20 acre block containing remnant bush of three types which had only ever been lightly grazed. Rough-barked Manna Gum around the edges bordered areas of grassland dominated by Kangaroo Grass and Black Wattle—almost a meadow with its wildflowers of Blue Squill, Common Everlasting, Scaly Buttons, Golden Moth Orchids, Creamy Candles and *Brachyscome* sp. The third section consisted of Small Grass-trees, Black Casuarinas and Snow-gums. The "skirts" of the Grass-trees had given protection from grazing to the smaller wildflowers.

We were lucky enough to find a patch of Purple Diuris *D. punctata* (vulnerable, Flora and Fauna Guarantee listing) in the course of the excursion, and that made everyone's day! However your discretion regarding the locality is requested.

Editor.

Calendar

December

- Fri. 6 Meeting: *Bats in the Wombat Forest* with Pat Prevett.
Sun. 8 Excursion: Berringa Reservoir and Historic Precinct. Leave 1.30pm.
Bring picnic tea.

January 2003

- Tues. 28 Committee Meeting 7.30pm @ Claire Dalman's

February

- Fri. 7 Meeting: *Habitat Changes as a result of Fire* with Kevin Tolhurst.
Sun 9. Excursion: Blakeville Fire Research Plots with Kevin Tolhurst.

Supper Duty: Dec: Joan and Kenneth Riddell; Feb. Del McDonnell.

Committee

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Meetings are held at the Ballarat Horticultural Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

Excursions: Depart from Creswick Plaza, Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30 am unless otherwise specified.

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